



ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

SUBSONIC ENGINES

ENGINE IDENTIFICATION: CFM56-5C2 BYPASS RATIO: 6.8
 UNIQUE ID NUMBER: 1CM010 PRESSURE RATIO (π_{00}): 28.8
 COMBUSTOR:
 ENGINE TYPE: MTF RATED THRUST (F_{00}) (kN): 138.8

REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO _x	SMOKE NUMBER
D _p /F ₀₀ (g/kN) or SN	11.6	57.9	59.0	14.3
AS % OF ORIGINAL LIMIT	59.4	49.1	60.5	66.0
AS % OF CAEP/2 LIMIT (NO _x)			75.6	
AS % OF CAEP/4 LIMIT (NO _x)			90.7	
AS % OF CAEP/6 LIMIT (NO _x)			103.0	
AS % OF CAEP/8 LIMIT (NO _x)			121.8	

DATA STATUS

- PRE-REGULATION
 x CERTIFICATION
 - REVISED (SEE REMARKS)

TEST ENGINE STATUS

x NEWLY MANUFACTURED ENGINES
 - DEDICATED ENGINES TO PRODUCTION STANDARD
 - OTHER (SEE REMARKS)

EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE
 (ANNEX 16 VOLUME II)

CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)
 x OUT OF PRODUCTION (DATE: -)
 - OUT OF SERVICE (DATE: -)

MEASURED DATA

MODE	POWER SETTING (%F ₀₀)	TIME (minutes)	FUEL FLOW (kg/s)	EMISSIONS INDICES (g/kg)			SMOKE NUMBER
				HC	CO	NO _x	
TAKE-OFF	100	0.7	1.308	0.01	0.93	32.60	11.1
CLIMB OUT	85	2.2	1.076	0.01	0.80	25.80	8.5
APPROACH	30	4.0	0.356	0.08	1.75	10.00	1.0
IDLE	7	26.0	0.118	5.68	34.00	4.19	1.1
LTO TOTAL FUEL (kg) or EMISSIONS (g)			466	1050	6546	7077	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D _p /F ₀₀ (g/kN) or AVERAGE SN (MAX)				7.6	47.2	50.9	11.1
SIGMA (D _p /F ₀₀ in g/kN, or SN)				0.6	1.7	0.0	1.6
RANGE (D _p /F ₀₀ in g/kN, or SN)				6.9-8.01	45.4-48.8	50.89-50.96	9.3-12.1

ACCESSORY LOADS

POWER EXTRACTION 0 (kW) AT - POWER SETTINGS
 STAGE BLEED 0 (% CORE FLOW) AT - POWER SETTINGS

ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	97.8-98.1
TEMPERATURE (K)	286-295
ABS HUMIDITY (kg/kg)	0.0061-0.0074

FUEL

SPEC	Jet A
H/C	1.95
AROM (%)	17.3

MANUFACTURER: CFM International
 TEST ORGANIZATION: CFM56 Evaluation Engineering
 TEST LOCATION: PTO Site IVD
 TEST DATES: 04/06/1991-05/06/1991

REMARKS

1. Ref GE Report R91AEB471.
2. Engine S/N 740-105.
3. Core engine Smoke Numbers reported

Compliance with Fuel Venting requirements: - ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)